

# PATENT ABSTRACTS OF JAPAN

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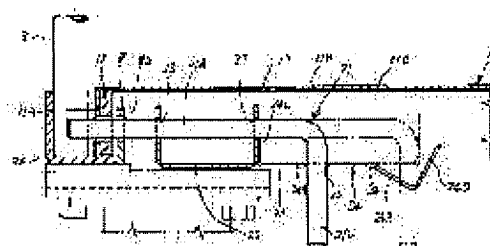
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## (54) ARTICLE TRANSPORT DEVICE WITH BASE LOCK DEVICE

### (57)Abstract:

**PURPOSE:** To perform a resin coating without setting a lock pin by providing a second bracket comprising a wide section and a narrow section inside a first bracket, forming the rise section of the narrow section so that it can be bent freely, and forming a recess for promoting bending at the bent section.

**CONSTITUTION:** A narrow section 24B of a second bracket 24 connected to a first bracket 22 of a base body 10 is bent at its rise section D. At the bent section, a recess 26 for promoting bending is formed. In this situation, a resin 12 is molded over the entire surface. Next, a lock pin 21 is set. In this case, because the rise section 24D is positioned not opposed to an inserting hole 23, its insertion can be made without collision of the rise section 24D with an operating section 21B. With the operating section 21B positioned at the outside of the rise section 24D by this insertion, the narrow section 24B is pushed up and the rise section 24D is bent to a position opposed to the inserting hole 23 to stop the lock pin 21 from coming out.



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CLAIMS

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[Claim(s)]

[Claim 1]While it has the following and a final controlling element bent and formed in an inner end of said lock pin at an inner end of a narrow part forms a rising portion which can contact freely at the time of \*\*\*\*\*, From the side, a final controlling element of a lock pin which projected and \*\*(ed) to said wide area forms a removable locking recess, and it said narrow part, While forming that it should consider as a position which made a rising portion a position which does not counter said insertion hole before carrying out the resin molding of the base body, and countered an insertion hole in a rising portion after a set of a lock pin, enabling free bending, A base locking-device accessory article carrying tool having bent in a position of a folding part and forming a crevice for promotion.

Allocate a back panel body and side panel bodies of two sheets in the shape of a double housing type by plane view, provide a base body which made that near end the lower part of one of panel bodies, and was connected with it enabling a free standing-up sideslip, and this base body, The 1st bracket that a base locking device which has a removable lock pin to a panel body at the time of a sideslip while carrying out the resin molding of the aggregate and forming it was formed, and this base locking device was united with said aggregate, and formed an insertion hole of a lock pin. A wide area which has the 2nd bracket formed successively from this 1st bracket to an inner direction, and connects this 2nd bracket with the 1st bracket via a heel.

A narrow part by the side of an inside.

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[Translation done.]

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## DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Industrial Application]This invention stores and keeps the article of a large number mainly dealt with at a store etc., and relates to the article carrying implement used for loading into a track etc. and conveying if needed.

[0002]

[Description of the Prior Art]Conventionally, as this kind of an article carrying implement, the simple article truck looked at by JP,58-48926,Y, for example is provided. That is, while forming a hole in the sheet member of two sheets, providing an operation lock pin in a slide movement possible row rotatable in a transverse direction through these holes and forming two or more heights in this operation lock pin, the slotted hole which allows passage of this height is opened for free passage and formed in said hole.

[0003]Conventionally [ this ], according to composition, an operation lock pin can be set to the sheet member side by passing a height using a slotted hole, and the pin insertion hole of a bracket may be engaged and released in the tip part of an operation lock pin by transverse direction slide movement in a set state. While being able to prevent the ejection of an operation lock pin by a front height at the time of secession in that case, an engagement posture can be maintained by the contact to the sheet member of both heights.

[0004]

[Problem(s) to be Solved by the Invention]Conventionally [ above-mentioned ], according to composition, neither formation of the correctly suitable slotted hole nor formation of a height can be performed easily, and operation of rotating an operation lock pin and making a height agreeing in a slotted hole cannot be easily performed from being based on intuition at the place which cannot be viewed. Only by lateral slide movement and rotation, although there is also form of performing engaging and releasing and posture maintenance (stopper action) in both the positions of engaging and releasing, In this case, set the operation lock pin to the sheet member side beforehand, and from having joined the sheet member to the \*\*\*\*\* foundation ring by welding.

When coating a base with resin, a locking device will also be simultaneously coated with resin and an operation lock pin can be smoothly operated at the time of use.

[0005]The place made into the purpose of this invention is at the point of providing the base locking-device accessory article carrying tool which can set a lock pin easily after resin coating while being able to coat resin, without setting a lock pin.

[0006]

[Means for Solving the Problem]That the above-mentioned purpose should be attained a base locking-device accessory article carrying tool of this invention, Allocate a back panel body and side panel bodies of two sheets in the shape of a double housing type by plane view, provide a base body which made that near end the lower part of one of panel bodies, and was connected with it enabling a free standing-up sideslip, and this base body, While carrying out the resin molding of the aggregate and forming it, form a base locking device which has a removable lock pin to a panel body at the time of a sideslip, and this base locking device, Have the 1st bracket that was united with said aggregate and formed an insertion hole of a lock pin, and the 2nd bracket formed successively from this 1st bracket to an inner direction, and this 2nd bracket, While it consists of a wide area connected with the 1st bracket via a heel, and a narrow part by the side of an inside and a final controlling element bent and formed in an inner end of said lock pin at an inner end of a narrow part forms a rising portion which can contact freely at the time of \*\*\*\*\*, From the side, a final controlling element of a lock pin which projected and \*\*(ed) to said wide area forms a removable locking recess, and it said narrow part, While forming that it should consider as a position which made a rising portion a position which does not counter said insertion hole before carrying out the resin molding of the base body, and countered an insertion hole in a rising portion after a set of a lock pin, enabling free bending, It bends in a position of a folding part and a crevice for promotion is formed.

[0007]

[Function]According to the composition of this this invention, a base body forms aggregate first and is obtained by connecting the 1st bracket with aggregate. The 2nd bracket is connected with the 1st bracket at this time, and the lock pin is extracted, while the narrow part of the 2nd bracket is bent so that it may become a position to which that rising portion does not counter an insertion hole. In this state, the mold of the resin is carried out to the whole.

[0008]Subsequently, a lock pin is set. That is, at this time, although a lock pin part is inserted in from the inside to an insertion hole, since a rising portion is a position which does not counter an insertion hole, that insertion is performed, without a final controlling element colliding with a rising portion. Push up to a narrow part and power is made to act, where a final controlling element is located in the outside of a rising portion by this insertion, and folding of the narrow part is carried out so that it may become the position to which the rising portion countered the insertion hole. The base body which has a base locking device by this can be constituted, and this base body is connected with a panel body, enabling free rocking.

[0009]Thus, while the assembled article carrying implement rocks a base body to horizontal form, loading of an article can be performed by carrying out the lock operation of the base locking

device. That is, the tip of the lock pin in which the lock pin is \*\*\*\*\* (ed) by making horizontal form rock a base body so that the final controlling element may contact a rising portion, therefore ejection was prevented has countered the suspending portion of a panel body from the inside. [0010] And a lock attitude is maintainable by engaging the tip of a lock pin with the panel body side, being able to perform an expected lock, rotating a lock pin after that, and making a final controlling element engage with a locking recess by making a lock pin project and \*\*. Lock release of a base locking device and standing-up rocking of a base body can be performed by twist operations with \*\*\*\*.

[0011]

[Example] One example of this invention is described based on figures below. As shown in drawing 3 and drawing 4, the article carrying implement 1 The back panel body 2 of one sheet, It comprises allocating the side panel bodies 3 of two sheets which carry out an opposed position in the front in the both sides part of this back panel body 2 in the shape of a double housing type by plane view, and allocating the base body 10 between the lower parts of said back panel body 2 and both the side panel bodies 3. Each panel bodies 2 and 3 have the angle-like drag flasks 2A and 3A, respectively, and the rear wheel 4 and the front wheel 5 of a right-and-left couple are provided via these drag flasks 2A and 3A, respectively.

[0012] Rocking of the back end of said base body 10 is attained between the standing position which connect with the lower frame 2A of the back panel body 2 via the hinge implement 6, with the back panel body 2 was made to meet, and the sideslip position supported by the lower frames 2A and 3A. It is connected by the connecting tool 7 between the proximity parts of the back panel body 2 and both the side panel bodies 3, and on the other hand, namely, it is enabling rotation of the right-hand side side panel bodies 3 so that the back panel body 2 may be met.

[0013] Said base body 10 is fabricated by carrying out the mold of the aggregate 11 with the resin 12. That is, as shown in drawing 5 and drawing 6, the aggregate 11 is two or more right-and-left accouplements (although the angle bar shows), before and after using steel, aluminum, etc. and locating between the medial surfaces of the connecting plate 11A of a right-and-left couple, and these connecting plates 11A. A pipe body and a round bar may be sufficient as this. It comprises the base plate (griddle) 11C allocated between the upper surfaces of 11B, and these connecting plates 11A and the right-and-left accouplement 11B, and the mold of said resin 12 is carried out by spraying etc. to this aggregate 11.

[0014] By the anterior part of said base body 10, it is formed in both sides by the base locking device 20, and this base locking device 20, It has the lock pin 21 which carries out an engaging-and-releasing operation to the locking hole 8a of the locking plate 8 which carried out the engaging-and-releasing operation at the back side vertical lever part of the side panel bodies 3 at the time of erect posture, and was established in the drag flask 3A at the time of a toppled attitude.

[0015] Said base locking device 20 has the 1st bracket 22 united with said aggregate 11, as shown in drawing 1 and drawing 2. Namely, the 1st bracket 22 is channel shape and both ends are fixed to the right-and-left accouplement 11B by making the releasing part into facing up. And the

insertion hole 23 of the lock pin 21 is formed in the prescribed spot of the vertical plate section of a couple in the longitudinal direction. The lock pin 21 consists of the lock pin part 21A inserted in the insertion hole 23 enabling a slide and free rotation, and the final controlling element 21B which was bent in the shape of a right angle, and was formed from the rear of this lock pin part 21A here.

[0016]From said 1st bracket 22, the 2nd brackets 24 are formed successively to an inner direction. This 2nd bracket 24 is bent, it is tabular and a subject consists of the wide area 24A of an outer side, and the narrow part 24B by the side of an inside. Said wide area 24A is carrying out bending formation of the connecting part 24C, shows this connecting part 24C to spite the inner surface of the 1st bracket 22, and is uniting with a heel. And the removable locking recess 25 is formed in the wide area 24A for the final controlling element 21B from the side by making it rotate, after making the lock pin 21 project and \*\*.

[0017]When said lock pin 21 \*\*\*\*\*, the rising portion 24D which the final controlling element 21B can contact freely is formed in the inner end of said narrow part 24B of bending of the shape of a right angle. And the narrow part 24B makes the rising portion 24D the position which does not counter said insertion hole 23, before carrying out the mold of the base body 10 by the resin 12, And it is formed that the rising portion 24D should be made the position which countered the insertion hole 23 after the set of the lock pin 21, enabling free bending, and it bends in the position of a folding part further, and the crevice 26 for promotion is formed.

[0018]As shown in drawing 3 and drawing 4, between the front end of said side panel bodies 3, The stay 28 for performing spacing, prevention from collapse of cargo piles, etc. is formed, this stay 28 is held via the holding fixture 29 at the front end of the left-hand side side panel bodies 3, enabling free idle movement, and it becomes removable at the barrel 30 which the free end provided in the front end of the right-hand side side panel bodies 3.

[0019]Next, an operation of the above-mentioned example is explained. The aggregate 11 including the base plate 11C is first formed for obtaining the above-mentioned base body 10, and the 1st bracket 22 is connected between the right-and-left accouplements 11B of the aggregate 11. As the 2nd bracket 24 is connected with the 1st bracket 22 at this time and the solid line of drawing 1 and drawing 2 shows the narrow part 24B of the 2nd bracket 24, While being bent so that the rising portion 24D may serve as a position which does not counter the insertion hole 23, the lock pin 21 is extracted.

[0020]In this state, the mold of the resin 12 is sprayed and carried out to the whole. Subsequently, after the insertion hole 23 is corrected, the lock pin 21 is set. That is, at this time, although the lock pin part 21A is inserted in from the inside to the insertion hole 23, since the rising portion 24D is a position which does not counter the insertion hole 23, that insertion is performed, without the final controlling element 21B colliding with the rising portion 24D.

[0021]Where the final controlling element 21B is located in the outside of the rising portion 24D by this insertion, It has prevented that push up to the narrow part 24B, make power act, bend and process this narrow part 24B so that that rising portion 24D may serve as a position which countered the insertion hole 23, as the imaginary line of drawing 1 and drawing 2 shows, with the lock pin 21 slips out. The base body 10 which has the base locking device 20 by this can be

constituted, and the base body 10 is connected with the back panel body 2 via the hinge implement 6, enabling free rocking.

[0022]Thus, the assembled article carrying implement 1, The right-hand side side panel bodies 3 are made to open in the shape of a right angle to the back panel body 2, and loading of an article can be performed by carrying out the lock operation of the base locking device 20, while rocking the base body 10 to horizontal form via the hinge implement 6 and making it lay in the upper surface of the drag flask 3A of the side panel bodies 3.

[0023]That is, by making horizontal form rock the base body 10, and making it lay in the drag flask 3A, the lock pin 21 of the base locking device 20 is \*\*\*\*\* (ed) so that the final controlling element 21B may contact the rising portion 24D, as shown in the imaginary line of drawing 1.

The tip of the lock pin part 21A in the lock pin 21 in which ejection was prevented by this has countered the locking hole 8a of the locking plate 8 from the inside.

And a lock attitude is maintainable by being able to perform an expected lock to the locking hole 8a through the tip of the lock pin part 21A, as shown in the solid line of drawing 1, rotating the lock pin 21 after that, and making the final controlling element 21B engage with the locking recess 25 by making the lock pin 21 project and \*\*.

[0024]Expected conveyance is performed and, as for the article carrying implement 1 which wholesaled the article and changed into the non-use state, the stay 28 is first removed from the barrel 30. And the lock of the base locking device 20 is canceled by making the lock pin 21 \*\*\*\*\*, after removing the final controlling element 21B from the locking recess 25. Subsequently, the base body 10 is made to rock upwards via the hinge implement 6, and the back panel body 2 is made to meet. And project again, the lock pin 21 is made to \*\*, and it is made to project behind the vertical lever part of end position. Subsequently, it is made to rotate around the pin spindle heart via the connecting tool 7 etc., and the right-hand side side panel bodies 3 are made to meet the back panel body 2 side. Thereby, by plane view, it folds up in L shape and may be kept.

[0025]The pars intermedia [ in plane view ] and rear side may be the mesh state in which many breakthroughs were formed, and a water break and breathability can make said base plate 11C good while it achieves a weight saving in this case.

[0026]

[Effect of the Invention]While being able to coat resin according to this invention of the above-mentioned composition, without setting a lock pin, a lock pin can be easily set after resin coating, and a lock operation is always easy operation, and can be performed in smooth operation.

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[Translation done.]